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Decision-making of Physical Therapists Regarding Discharge Planning and Future Independence Level for Patients from the Acute Care Setting: A Focus on Age

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Decision making of physical therapists regarding discharge planning and future independence level for patients from the acute care setting: A focus on age

Julianna Hermes

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Abstract

Ohio Physical Therapy Association (OPTA) members were surveyed to determine the factors they use to determine discharge placement from the acute care setting. Ageism in the field of physical therapy also was explored. Fifty-two participants who identified themselves as working in the acute care setting with the OPTA were selected from the OPTA membership directory. Case studies and a questionnaire designed for the study were distributed by mail. A total of 27 surveys were obtained, resulting in a 52% return rate. Participants used a variety of factors to determine discharge destination of patients with varying disorders. No statistically significant difference was found between the case studies in regards to discharge placement based on age. The results indicate that physical therapists use a variety of factors, other than age, to determine discharge placement and predictability of future independence level.
Introduction

Discharge planning, as defined by Mosby’s Medical Dictionary, are the activities that facilitate a client’s movement from one health care setting to another (Anderson, 1998). Discharge planning is an interdisciplinary process involving physicians, nurses, social workers, physical therapists, and occupational therapists. The main goal of discharge planning is to help make the transition from one health care setting to another easier for the patient. It also helps to enhance the continuity of care provided to the patient. Even though discharge planning involves a number of different disciplines there is little research as to how these disciplines work together to make a final decision on patient placement.
Literature Review

Research has been conducted on the factors used to help in the decision-making process. For example, researchers have looked at the following factors when deciding on discharge planning for patients: the ability to perform ADLs, insurance coverage, and patient requests (Uli & Wood, 1995). Physical therapists play a key role in the discharge planning of patients and yet there is even less research to document their decision-making process.

Age also seems to play a role in determining discharge placement. Ageism can impact the type of care received by the older adult from the health care professional (Weir, 2004). Ageism as defined in a study by Cohen (2001) is a process of systematic stereotyping of and discrimination against people because they are old, just as racism and sexism accomplishes this with skin color and gender. Older people are categorized as senile, rigid in thought and manner, old-fashioned in morality and skills. Ageism allows the younger generations to see older people as different from themselves; thus they subtly cease to identify with their elders as human beings (Cohen, 2001). To this end, the purpose of this research is to investigate the role of the age of a patient and its impact on discharge planning by physical therapists. An overview of the types of discharge placements available for patients, factors influencing discharge planning, ageism among health care providers and factors influencing physical therapists discharge placement decisions will be covered in the literature review. At the conclusion of the literature review, the present study will be introduced.

*Types of discharge placements*

Discharge planning is the plan of activities that facilitate a client’s movement from one health care setting to another and usually begins on the first day of rehabilitation in the acute care setting (Anderson, 1998). Commonly, discharge planning is an interdisciplinary team effort; the
team works together in order to decide the best placement of the client (Dill, 1995). There are a variety of placement settings available for the patient. Patients can be discharged to a rehabilitation facility where they will receive aggressive physical, occupational and speech therapy for three hours a day (Mauthe, Haaf, Hayn, & Krall, 1996; Powell, 2000). The patient must also be able to follow one-to-two step commands (Powell, 2000). Transitional care units are available within an acute care hospital. They provide rehabilitative services for patients who can handle one and a half hours of therapy per day (Powell, 2000). The transitional care unit is available for medically stable patients who may be suffering from complex medical problems (Powell, 2000). The least intensive therapy setting is the extended care facility or skilled nursing facility. Skilled nursing facilities offer a less intense pace; therapy may be provided for less than one hour a day (Powell, 2000).

Factors Influencing Discharge Planning

There are a number of factors that are used to help make decisions about health care and discharge planning, especially when there is uncertainty or ambiguity concerning the optimum of intervention (Jette, Grover, & Keck, 2003). Research suggests that given similar data about a patient, resources, and organizational structure, the decisions made by different members of the interdisciplinary team will vary (Jette et al., 2003). Researchers have suggested that physical and occupational therapists focus on a patient’s function at the initial evaluation and examination and on the patient’s prior level of function (Jette et al., 2003). Both physical and occupational therapists focus on having mutual goals with the patient and family in order to provide the best rehabilitation potential for the patient. Other factors that impact the discharge decisions made by the physical therapist may include the ability to perform transfers and walking, while the
occupational therapist will look more at the patient’s ability to perform instrumental and avocational activities of daily living (Jette et al., 2003).

Discharge destination can also be associated with demographic characteristics of patients such as age, socioeconomic status, caregiver support and wishes (Jette et al, 2003). Researchers have found that a less experienced physical therapist is less likely to discharge a patient home because they are more conservative in their decision making process. The novice therapist is more likely to recommend a supported environment rather than home for patients especially if the patient’s support system or safety of the home environment is not clear to the therapist (Jette et al., 2003).

Discharge planning from an acute care environment involves a team decision about the best setting for a patient after leaving the hospital. These decisions are made with the input from the patient, the physician, family members, and other hospital staff (Dill, 1995). The physical therapist also plays a role in this decision making process. Many times the physical therapist bases his/her decisions on the patient’s function at the time of the initial evaluation and examination. The physical therapist also looks at the patient’s prior level of function when determining the proper discharge placement. Setting mutual goals and recognizing the importance of a patient's motivation are important aspects of the discharge planning process that physical therapists take into consideration when planning discharge (Jette et al., 2003).

A study conducted by Uli and Wood (1995) examined the decision making process of physical therapists with regards to discharge placement in skilled nursing facilities. The researchers used a survey study with open-ended and closed-ended questions to help determine what factors physical therapists used when deciding the placement of a patient (Uli & Wood, 1995). As part of a federally funded evaluation of admissions procedures in all Medicare
certified skilled nursing facilities, 184 physical therapists in Connecticut were asked to participate. The physical therapists were presented with four different case scenarios and were asked to decide if the patient would benefit from daily physical therapy. The four case study scenarios varied in content. Case study one consisted of a patient whom had an amputation, but also had a neurological condition since birth that prevented him from using a prosthesis. Case study two consisted of a patient with a hip fracture, who also had poor eyesight and a previous stroke on the same side as the hip fracture. Case study three consisted of a patient who had a medical problem similar to the first two, but presented with a good prognosis for improvement and recovery. The final case study consisted of a patient who was independent and did not require any physical therapy services. The results of the study indicated that Medicare and Medicaid coverage appeared to impact the discharge destination of a patient, especially for the novice physical therapist (Uli & Wood, 1995). Physical therapists that had been practicing from many years were less likely to look at third party payer factors decisions when deciding on discharge destination, while novice physical therapists did allow third party payers to have an impact on their decision making (Uli & Wood, 1995). In addition, younger therapists with little experience applied fiscal rules most frequently (Uli & Wood, 1995).

The researchers hypothesized that these decisions were based on the therapist’s inexperience and lack of confidence in knowing what patients would benefit from physical therapy. Along with these findings the authors reported that the therapists based their decisions on the patient’s potential for meaningful, rapid, and measurable improvement, the patient’s prior level of function, and acuity of the condition. The authors reported that daily physical therapy was indicated for a patient with a recent, acute medical problem (i.e., hip fracture) who had ‘good’ or ‘excellent’ potential for recovery and the ability to make ‘good’ or ‘excellent’ progress
toward a prior level of function, and for whom skilled therapy was necessary in order to achieve those goals. Less than daily physical therapy was indicated for patients with an acute or chronic problem who had ‘fair’ or ‘limited’ potential for recovery, whose progress toward a prior level of function was slower or had plateaued, and for whom skilled services may not be required. No physical therapy was recommended for patients with a chronic long-term problem, or for a patient who was already independent. Recognizing the factors used to determine the discharge destination of a patient helps to support the decision behind such placement.

The ability to perform activities of daily living (ADL) is also a predictor used in deciding the discharge destination of patients from the acute care setting (Jette et al., 2003; Mauthe, Haaf, Hayn, Krall, 1996). Predicting discharge destination by looking at how many ADLs a person is capable of performing is one tool that physical therapists use to make their decisions (Jette et al., 2003; Mauthe et al., 1996). Mauthe et al. (1996) conducted a study that used the Functional Independence Measure (FIM) [Granger, Hamilton, Keith, Zielezny, & Sherwin’s (1986), as cited in Mauthe et al., 1996] to determine the independence of patients after suffering from an acute stroke. The Functional Independence Measure is commonly used in clinics to decide how functional a patient will be after leaving the hospital. The FIM is an instrument of 18 scaled functional items, assessing six areas of function using a one to seven grading system. The functional areas are self-care, sphincter control, mobility, locomotion, communication, and social cognition. A score of seven indicates a patient is totally independent in the activity without adaptive equipment or medication. A score of one indicates total dependence on a helper to perform the majority of the activity without adaptive equipment or medication. The results of the study found that the following six items of the FIM were the strongest predictors of living independently for a patient who has suffered an acute stroke: bathing, controlling bowel
movements, toileting, and social interaction, dressing the lower body and eating. Even so, there is evidence that being able to perform ADLs in a structured environment may not translate into similar independence at home (MacNeill & Lichtenberg, 1997). In the elderly population, ADL performance is not based solely on physical abilities, but is also determined by general health status, deconditioning, and motivation of the patient (MacNeill & Lichtenberg, 1997). Although the ability to perform ADLs does have an impact on the discharge destination of the patient it can not be the only factor that physical therapists look at when making important decisions about the patient.

MacNeill and Lichtenberg published a study in 1997 that identified unique predictors of the ability to return to living alone in geriatric patients undergoing medical rehabilitation. The participants in the study were aged 60-99 and were identified as having lived alone prior to admission into the hospital. Subjects underwent both functional and cognitive assessment. The results of the study demonstrated that both the FIM [Granger, Hamilton, Keith, Zielezny, and Sherwin’s (1986), as cited in Mauthe et al., 1996] and the Mattis Dementia Rating Scale (DRS) [Mattis (1988), as cited in MacNeill and Lichtenberg, 1997] helped in providing significant and unique variance in prediction of discharge disposition. MacNeill and Lichtenberg stated that the DRS are used to help in the evaluation of attention, initiation, memory, abstract reasoning, and visuo-spatial construction. MacNeill and Lichtenberg’s results showed that patients discharged home alone performed similar to their counterparts that were discharged home with supervision. However, patients discharged home alone scored above the cutoff scores on the DRS, while those sent home with supervision scored lower (MacNeill & Lichtenberg, 1997). Therefore a lower score on the DRS indicates that a patient is capable of returning home with supervision. The patient is capable of living in his or her home environment as long as supervision is present.
to help when necessary. Research has shown that focusing solely on functional performance in determining discharge planning is not efficient.

Discharge destination has been linked to demographic characteristics of patients (Jette et al., 2003). Age has been shown to be a factor used in determining the proper placement of patients from the acute care setting (Jette et al., 2003). When physical therapists are asked about common factors they use in determining discharge destination, age appears when analyzing the demographic information of the patient. Jette et al. briefly discussed demographic information that is commonly considered in planning discharge placement for a patient. Along with age, therapists also look at socioeconomic status, caregiver support, living situation, and the patient’s wishes. Although some of the demographic information of the patient is important in determining proper placement of the patient, age should not affect the discharge placement of the patient. However rather than focusing on a patient’s age the therapist should look more closely at the patient’s functional abilities at the time of discharge.

**Ageism among Health Care Providers**

As reported by Weir, ageism was first defined by Butler in 1969 (Weir, 2004). Since then people have become more aware of the issue of ageism and its prevalence within the health care field. Ageism can be considered a socially constructed phenomenon, a complex set of social relations that tend to discriminate against older people, by oversimplifying the older population and, as a result, stereotyping all older adults into one category (Weir, 2004). According to Weir, the issue of ageism within the health care profession. In the article she discusses “New Ageism” which is a term created with reference to the negative attitudes held by individuals who are involved in the care of older adults and who should be involved in the promotion of anti-ageist
views. Weir also discusses the impact of books, magazines, and visual media on the formation of ageist views. Young adults, attitudes are shaped by their surroundings. In fact, the ageist attitudes toward older adults portrayed by the media have been linked back to attitudes of young adults in regards to older adults. As a result, young adults have been shown to have the most negative views about older adults; these young adults are the future health care providers for the older adult. Their ageist attitudes could greatly impact the quality of care received by the older adult.

In a study published by Reuben, Fullerton, Tschann, and Croughan-Minihan (1995) the attitudes of beginning medical students toward older persons were analyzed. The purpose of the study was to examine the attitudes of beginning medical students’ toward older persons and their medical care. Five hundred seventeen first year medical students from five University of California medical schools participated in the study. Demographic characteristics, personal contacts with older persons, and previous coursework or research experience with older persons were assessed. Knowledge with regard to aging was measured, along with the attitudes of students toward older persons using the Aging Semantic Differential (Rosencranz and McNevin 1969, as cited by Reuben et al., 1995), and the Maxwell-Sullivan Attitude Scale (Maxwell and Sullivan 1980, as cited by Reuben et al., 1995). The Aging Semantic Differential is comprised of 32 items, which classify attitudes into three major dimensions. Participants were asked to choose between two adjectives that describe stereotypical younger and older adults. For each dimension, higher scores indicated more negative attitudes toward older adults. The Maxwell-Sullivan attitude scale was used to measure attitudes toward the medical care of older adults. Higher scores indicated more negative attitudes of older adults. The results of the study conducted by Reuben et al. (1995) demonstrated a remarkable presence of unfavorable attitudes
toward older adults, including negative and significant influences on decision making. Male
gender and Asian ethnicity were associated with less favorable attitudes on many scales;
however, geriatric knowledge and having visited a long-term care facility were predictors of
more positive attitudes on some scales. The authors suggested that by exposing health care
students to older adults during clinical rotations ageist attitudes can be shifted from a negative
perspective to a more positive perspective.

Sheffler (1998) examined the attitudes of nursing students towards older adults and the
impact of clinical placement on their attitudes. The purpose of the study was to examine nursing
students’ attitudes before and after a clinical experience in a nursing home to determine if there
was a relationship between nursing students’ and faculty’s attitudes toward the elderly and to
determine if nursing students’ attitudes were influenced by their level of knowledge about the
elderly. All participants in the study were sophomore nursing students in a fundamentals nursing
course. Faculty’s attitudes in regards to older adults were analyzed to see if they influenced the
attitudes of the students. Thirty-five subjects participated in the study; all subjects completed the
Kogan’s Attitude Scale (Kogan 1961, as cited in Sheffler, 1998), Palmore’s Facts on Aging Quiz
(Palmore 1977, as cited in Sheffler, 1998) and a demographic sheet. Kogan’s Attitude Scale was
used to measure student attitudes in the study. The Kogan’s Attitude Scale consisted of 34
statements, 17 were positive and 17 were negative. Palmore’s Facts on Aging Quiz was used to
measure knowledge about the elderly. Palmore’s Facts on Aging Quiz is made up of 25 questions
based on mental, physical, and social facts about the aging process. Higher scores achieved on
both the Kogan Attitude Scale and Palmore’s Facts on Aging Quiz indicated a more positive
attitude toward older adults. The results of the study indicated an improvement in students’
attitudes toward the elderly after their clinical experience in a nursing home setting. Higher
scores were achieved on both the Kogan Attitude Scale and the Palmore’s Facts on Aging Quiz from pretest to posttest indicating more positive attitudes toward older adults after a nursing home clinical rotation. Other results indicated that students may tend to follow the attitudes of their clinical instructor. The results of the study indicated that faculty members with higher attitude scores also had students with higher attitude scores toward older adults. The findings suggested that students may emulate the attitudes of their clinical instructors. The author concluded that clinical experience in a nursing home may help to enhance the students’ understanding of older adults as individuals with feelings and needs rather than as a stereotypical older adult (Sheffler, 1998). The study also demonstrated that students are easily influenced by the attitudes of faculty; therefore, in order to improve the quality of care received by older adults faculty must express a positive attitude toward older adults when teaching material regarding aging.

In a study conducted by Giles, Paterson, Butler, and Stewart (2002) attitudes towards older people and the knowledge of aging held by clinical educators and students in physiotherapy and occupational therapy were compared. Participants in the study completed a questionnaire that consisted of the Kogan scale (Kogan 1961, as cited in Giles et al., 2002) concerning attitudes towards older people, Palmore’s Facts on Aging Quiz version 1 (FAQ1) (Palmore 1999, as cited in Giles et al., 2002), and questions concerning social interaction with older people and demographic information. The results of the study showed that clinical educators had a significantly lower negative bias on the Facts on Aging quiz than the students in both professions. As stated in the study conducted by Sheffler, students typically emulated the attitudes of their clinical educators. As a result if clinical educators have positive attitudes toward older adults than students may also have positive attitudes toward older adults. These results
suggest that health care education and practice had little impact on attitudes and knowledge related to aging.

In a study conducted by Taylor and Tovin (2000), the attitudes of student physical therapists toward older adults were measured. One hundred and ninety students enrolled in three physical therapy schools participated in a four-page questionnaire that consisted of the Kogan Attitude scale (Kogan 1961, as cited in Taylor and Tovin, 2000), the modified Coren scale (Coren, Andressi, Blood, Kent, 1987), attitudes toward different work environments, and demographic and curricular information. The researchers wanted to examine the attitudes of physical therapy students toward older adults and their attitudes toward working with older adults. Along with examining students’ attitudes, the researchers wanted to assess physical therapy students’ attitudes in regards to clinical setting. The researchers hypothesized that older physical therapy students (>24 year of age) would have more favorable views of the elderly in general and would have more favorable views of working with elderly patients than younger physical therapy students. In addition, they predicted respondents, on average, would rate working in a nursing home lower than other work environments. Also they predicted respondents who have completed a geriatric/gerontology course would have more favorable views of working with elderly patients than respondents who did not have access to such a class. Finally, they predicted that respondents identified that they would enjoy working in an out-patient center or sports medicine center would have negative views of working with elderly patients. While respondents identifying that they would enjoy working in a nursing home would have positive views of working with elderly patients. The results indicated that students ranked working in a nursing home ninth out of ten areas indicating that working in a nursing home would be the second to last place a physical therapy student would want to work. The study also showed that
students wishing to work in wellness centers and pediatric centers had less favorable attitudes toward working with the elderly than students who wished to work in school systems and nursing home settings. The results of the study indicated that physical therapy students were less likely to want to work in a nursing home after graduation. With the growing population of older adults in the United States it is imperative that physical therapists be willing to work with older adults.

In a study conducted by Horowitz, Savino, and Krauss (1999) ageism was looked at as a potential factor affecting the outcome of the decision making process made by occupational therapists. The purpose of the study was to determine the extent of age bias among occupational therapists in determining the degree to which a client’s age affects clinical decision making. Questionnaires were mailed to 128 randomly selected occupational therapists on Long Island, New York. All respondents were divided into two groups. Each group was provided with identical questionnaires and case studies, the only difference was the age of the patient. The results of the study indicated no significant differences in anticipated outcomes between mean scores for the seven areas assessed (i.e., ambulation, ADLs, transfers, general rehabilitation potential, and need for outpatient therapy, anticipated living situation, and driving capability), however significant differences were indicated in regards to mobility and return to work. Occupational therapists thought that older adults were more likely to need mobility aids for independent ambulation. Results also showed that occupational therapists were not influenced by negative attitudes toward older adults in regards to clinical decisions making. Further research is needed to better understand the impact of age on the decision making processes of health care providers.
Factors Influencing Physical Therapist's Discharge Placement Decisions

Currently there is only one study that has researched how physical therapists decide the discharge destination of patients (Jette et al., 2003). The purpose of the study conducted by Jette et al. (2003) was to explore and describe the decision-making process engaged in by physical and occupational therapists when making recommendations about the discharge of patients from the acute care setting. In a qualitative pilot study, interviews with seven physical and occupational therapists that worked at a readily accessible institution were conducted. All therapists were interviewed three times. Interviews were audio taped so that information for the next interview could be collected. Topics discussed in the interview included: hierarchy of decision making, how final decisions were derived, and how the process of discharge planning was learned. The authors concluded that physical and occupational therapists’ recommendations for discharge were guided by four constructs: patients’ functioning and disability, patients’ wants and needs, patients’ ability to participate in care, and patients’ life context. Life context as described by the researchers was the physical, social, and attitudinal environment in which the patient lived his/her life. Limitations of the study included a small sample size with little generalizability, the use of previous interview responses to make interview questions for the next interview, homogeneity of the participants, and the lack of geographic variability of the subjects.

The Present Study

The information derived from the pilot study conducted by Jette et al. (2003) describes the decision making process of both physical and occupational therapists. More research is needed in order to understand the discharge decision making process of physical therapists. The information currently available is not a representation that can be generalized to the population of physical therapists. The purpose of this study was to continue exploration of factors that are
important for a physical therapist when making recommendations for discharge. Research has shown that ageism is present in the health care profession, but little of the research focuses on ageism in decision making of physical therapist when determining discharge placement. Specifically, the present study evaluated the impact the age of the patient had on discharge planning and prediction of future independence level by physical therapists in the acute care setting.
Methods

Participants

Participants for the study were recruited from the Ohio Physical Therapy Association (OPTA) membership directory. The OPTA provided names of those members who worked in an acute care setting. The OPTA has 52 members who identified themselves as working in the acute care setting and all 52 members were asked to participate. Inclusion criteria for all participants were that they were a practicing physical therapist in the state of Ohio, who identified themselves as working in the acute care setting, and they were a member of the OPTA.

Apparatus/Instrument/Measures

The researchers designed three case study scenarios. Each case study had similar information; however the case studies varied by the age of the patient. There were two versions of each case study (i.e., a young and old). Each case study was reviewed by an experienced physical therapist to determine content validity of each case study. Each case study had a patient suffering from a specific impairment. The case study provided sufficient information in order for the subjects to adequately decide discharge destination for the patient. After each case study the participant was asked to determine discharge placement for the patient and also to determine on a Likert scale the likelihood that the patient would be independent within six months. A demographic survey was also sent to each of the participants. The case studies and the survey took approximately 15 minutes to complete. See Appendix A for a copy of the case studies and questionnaire.

Procedures

After receiving IRB approval for the study, all participants were sent a cover letter, each subject received one version of each of the three case studies (e.g., Case Study 1 young, Case
Study 2 old, and Case Study 3 young) and the demographic data sheet for the study along with a self-addressed stamped envelope. Each participant was randomly assigned three case studies based on his/her subject number.
Results

Data were analyzed by using descriptive statistics. SPSS statistical software was utilized during analysis of the data.

Demographics

Twenty-seven valid surveys and questionnaires were returned for a 52% response rate. Demographic information was obtained from all participants. Approximately 15% of the participants were male, while 85% were female. All participants reported being Caucasian. The mean age of the participants was 40.9 years old ($SD = 12.88$) with a range of 24 to 74 years old.

Demographic information was also collected in regards to educational background, years practicing as a physical therapist, and the number of years in the current setting. Although the study was intended to focus on just acute care physical therapists, surveys were returned from therapists practicing in five different settings. 70% of the participants were currently practicing in the acute care setting, 4% in outpatient, 7% were directors of rehab, 4% practiced in stroke research, while 11% were retired, 4% failed to report the practice setting. Approximately 59% of the participants practiced physical therapy with a Bachelor’s degree, 37% had a Master’s degree, and 4.0% had a certificate. The mean years of experience were 15.70 ($SD = 12.22$), with the minimum being 2 years while the maximum was 45 years. The mean years in the current setting were 9.76 years ($SD = 9.19$), with a range of .5 to 35 years. All data collected from the participants was analyzed secondary to the low subject number.

Summary of Discharge Placement from the Acute Care Hospital

Each case study was analyzed to determine the factors physical therapists used in determining discharge placement from the acute care setting. Each participant was asked to determine the most appropriate discharge destination for the adult in the case study based on the
information provided. The participants also were asked to hypothesize about the adults’ independence six months following discharge from the hospital. Qualitative analysis was conducted on the information collected regarding factors used in determining discharge destination as listed by each participant.

**Case Study 1: Cerebral Vascular Accident**

Data were analyzed from Case Study 1: CVA. Information from each version (e.g., young and old) of the case study was analyzed and then the data was compared. Eleven participants received the 40 year old version while 16 received the 70 year old version. Each participant was asked to determine the likelihood of independence within six months. A 7-point Likert scale was used to determine the likelihood of independence. With a score of one indicating independence to be very unlikely after six months and a score of seven indicating independence to be very likely after six months. The mean for the 40 year old version was 5.72 (SD = 1.103) compared to the mean of 5.56 (SD = .73) for the 70 year old version. No statistically significant difference was noted between the two versions. One hundred percent of the participants for the 40 year old version determined a rehab setting would most benefit the patient. The older version had a small amount of variability in discharge placement. Twelve and a half percent of participants decided to discharge the patient to the subacute setting, 81.25% decided to discharge the patient to a rehab setting, while 6.25% of the participants neglected to determine a discharge placement for the patient. Data were analyzed using Chi-square tests and no statistically significant difference was noted in discharge placement between the two versions of case study one.
Case Study 2: Traumatic Brain Injury

Case study 2: TBI was analyzed and the data was compared. Eleven participants received the 40 year old version, while sixteen received the 70 year old version. The mean score for independence on the Likert scale for the 40 year old version was 3.36 ($SD = 1.12$), while the mean score for the 70 year old version was 3.38 ($SD = 1.54$). No statistically significant difference was noted between the two versions of case study two. Discharge placement for the patient with age being considered resulted in the following data. Sixty-four percent of the participants in the 40 year old version determined to discharge the patient to the subacute setting, and 36% of the participants determined to discharge the patient to a rehab setting. Eighty-eight percent of the participants in the 70 year old version discharged the patient to the subacute setting, while twelve percent discharged the patient to a rehab setting. Data was analyzed using Chi-square tests and no statistically significant difference was noted in discharge placement between the two versions of case study two.

Case Study 3: Tibia Fracture

Case study 3: TF analyzed for statistical significance. Sixteen participants received the 40 year old version, while eleven received the 70 year old version. The mean score for independence on the Likert Scale for the 40 year old version was 6.75 ($SD = .577$). The mean was 6.91 ($SD = .30$) for the 70 year old version. The 40 year old version demonstrated the most variability in discharge placement for the patient. Sixty-three percent of participants chose to discharge the patient home, 12% chose to discharge the patient to a subacute facility, while 25% of the participants chose to discharge the patient to a rehab facility. Forty-five percent of participants in the 70 year old version determined to discharge the patient home, while 45% determined to discharge the patient to a subacute facility. One participant did not determine a
discharge destination for the patient. Chi-square tests were analyzed to determine if a statistically significant difference was present. No statistically significant difference was noted between the two versions of case study three in discharge placement.

**Qualitative Data Collected from Case Studies**

Each case study was analyzed to determine the factors physical therapists use in determining discharge placement for patients from the acute care setting. See Tables 1-3 for a summary of the data collected. Participants in Case Study 1 (40 year old with CVA) used sixteen different factors to help in determining discharge placement for the patient. Prior level of function, age, and the need for multi-discipline care were the leading three factors used by therapists. The three leading factors used in determining the discharge placement for the patient in Case Study 1 (70 year old with CVA) were prior level of function, home environment, and current functional level, respectively.

Case Study 2 (40 year old with TBI) participants used a variety of factors to help in determining discharge placement for the patient. The three leading factors were tolerance to therapy at discharge facility, endurance, and activity tolerance respectively. Case Study 2 (70 year old with TBI) participants used seventeen different factors to determine discharge placement of the patient. Tolerance to therapy, endurance, and prior level of function were the three leading factors used to determine discharge placement.

Participants for Case Study 3 (40 year old with tibia fracture) used nineteen different factors to help in determining the discharge destination of the patient. Support at home, ability to ambulate, and transfer ability were the three leading factors used in determining placement. Case Study 3 (70 year old with tibia fracture) resulted in sixteen different factors being considered when determining discharge placement for the patient. Best placement for the subject (i.e.,
Rehab vs. home vs. subacute), support of husband, home environment, assistance needed and transfers were the top factors used in determining discharge placement for the patient.
Discussion

Few researchers have investigated the factors used to determine discharge placement. The present study was designed to provide descriptive data about the factors physical therapists use in determining discharge placement from the acute care setting. In addition, the study also focused on whether or not physical therapists had ageist attitudes when determining the proper discharge placement for the patient.

The present study demonstrated that physical therapists were not ageist when determining discharge placement for the patient. In addition, the study also demonstrated the wide array of factors used by therapists when deciding discharge placement. In all three case studies no statistically significant difference was noted when determining discharge placement for the patient. In regards to patient independence six months following discharge from the acute care setting there also were no statistically significant differences in prediction between the two versions of each case study. Nevertheless upon visually reviewing, the data, the following observation was made in regards to independence level of the subject in each of the three case studies. As a result of the participants’ hypothesis in regards to independence, discharge placement tended to correlate with independence rating. The greater the independence rating the more likely the patient was to be discharged home from the hospital. The lower the independence rating the more likely the patient was to be discharged to the subacute setting.

Results of the present study demonstrate both similarities and differences as compared to previous research conducted on the topic. Similar to the findings by Jette et al. (2003), physical therapists used a variety of factors to aide in the decision making process of discharge planning. Each participant provided a list of the factors he/she used in determining discharge placement. There was overlap between therapists, which helps to support the idea that therapists look for
specific factors when determining placement. Differences in factors were also present in the study which also helps to support the idea that discharge planning is complex, and it takes several factors to help determine the best situation for the patient. Each case study had a large amount of variability in the factors used by therapists to determine the most appropriate discharge placement. The top three factors associated across the case studies were prior level of function, endurance, and potential discharge setting.

In Weir’s study (2004) she stated that it is generally considered and accepted that a degree of ageism exists within the parameters of health-care provision, in both covert and overt forms. This statement has been shown to be true in previous research; however in the present study it was found that physical therapists do not have ageist attitudes. Although some physical therapists used age as a determining factor when deciding on discharge placement, the study resulted in no statistically significant difference with age as a factor in deciding discharge placement or prediction of independence in six months.

**Qualitative Factors Used to Determine Discharge Placement**

Prior level of function and age were the two factors most repeated by therapists. When determining discharge placement for a patient it is important to know and understand his/her prior level of functioning. In a study conducted by Jette et al. (2003), many of the therapists in the study also stated that they looked at prior level of function prior to deciding discharge placement from the hospital. In the young, CVA case study all participants felt the patient would benefit most from the rehab setting, because the patient would be able to tolerate 3 hours of rehab. Understanding and knowing the functional status of the patient at time of discharge can help in predicting the patient’s ability to progress with rehab. In the young TBI case study ninety-one percent of the participants felt it was important to consider the patient’s ability to
actively participate in therapy. This helps to support the notion that physical therapists determine placement based on providing the best quality of care for the patient. Physical therapy is demanding, and an extremely ill patient can tend to be incapable of progressing properly secondary to overexertion or low endurance. Low endurance will not allow the patient to spend a lot of time with therapy and fatigue becomes a major issue in low endurance patients. If the patient becomes too fatigued during treatment, sometimes they are unable to participate in afternoon sessions or even worse are exhausted for a few days and unable to participate in any activities. It is inappropriate to expect a patient with low endurance to tolerate a large amount of therapy and as a result many times the patient will be discharged to the subacute setting until his/her endurance increases.

In studies conducted by Uli and Wood (1995), participants determined the ability of a patient to progress appropriately was very important in determining discharge destination. As a result the patient’s tolerance to therapy and the demand of therapy need to be strongly considered when determining discharge destination. This notion was supported throughout the three case studies.

In studies conducted by Mauthe et al. (1996) and Jette et al. (2003) the patient’s ability to perform activities of daily living greatly impacted the discharge placement of the patient. The greater the number of activities of daily living completed by the patient the greater the likelihood that the patient would be discharged home. As indicated by the current study regardless of age, the functional ability of the patient tended to be the leading determining factor in deciding discharge placement for the patient. All three case studies had at least one subject say they used age a determining factor. Although, no statistically significant differences were noted based on
age between the different versions of each case study, the current research does support the notion that age is often used as a determining factor.

There is currently only one study that has looked at the factors that influence the discharge planning decisions of physical therapists. Further research in this area should be conducted in order to help in understanding how physical therapists decide discharge destinations of their patients. The information gathered from such research can be used to help educate future physical therapists, help physical therapists to focus their decisions on factors that have been proven important, and help other professionals understand the thought process of physical therapists. The present study helped to clarify factors used by physical therapists in determining discharge placement from the acute care setting.

Limitations of the Present Study

The present study had several limitations that should be acknowledged. A significant limitation to the study was the small sample size. This small sample size limits the ability to generalize the data to a large cohort of physical therapists. The sample sized used is not a thorough representation of all physical therapists and their ideas and attitudes toward discharge placement.

Limitations associated with the case studies and questionnaire should also be noted. First, the case studies may not have described the patient in enough detail for the participant to make an accurate decision in regards to placement. Several of the participants noted that they had made assumptions about some of the material in the case study in order to determine discharge displacement. Because the questionnaire was designed specifically for this study it is difficult to determine whether or not the survey utilized was an effective tool in collecting the necessary
data. However, the case studies and questionnaires were reviewed by faculty at the Medical College of Ohio and were determined to be easy to understand and thorough.

The OPTA provided a mailing list of acute care therapists in the Ohio, however as the surveys were received it was noted that not all participants were currently practicing in the acute care setting. This limits the ability to generalize data to physical therapists working in the acute care setting.

**Suggestions for Future Research**

Future studies in the area of discharge planning and ageism should be conducted to determine whether or not physical therapists are ageist. The older population is growing and it is important that this population receive the quality of care they deserve. Ageist attitudes will hinder the therapists’ ability to determine proper discharge placement for an older adult. A larger sample size should be utilized in order to receive a better representation of all physical therapists. Data could then be used to compare attitudes of therapists based on clinical setting. Finally, a nationwide study should be conducted to determine if differences are present based on geographic location.
Conclusion

The present study revealed that physical therapists use a variety of factors to help determine the best discharge destination for a patient. Although, many of the participants stated they used age as a factor, no statistically significant evidence was revealed to state that the physical therapists were ageist. The variability in responses from the participants helps to demonstrate the complexity of discharge planning. Discharge planning is a multi-disciplinary approach that should be utilized to provide the patient with the best possible care.
References


Dear Survey Participant,

My name is Julianna Hermes and I am a physical therapy student pursuing a Master of Science in Biomedical Sciences degree at the Medical College of Ohio. I received your name through the Ohio Physical Therapy Association (OPTA) to assist in a study I am conducting as part of my graduation requirements.

There is currently only one study available that looks at factors physical therapists use to help in deciding discharge placement of patients from the acute care setting. The study was a pilot study that evaluated both physical and occupational therapists decision making in regards to discharge planning. The purpose of this survey is to continue exploration of factors that are important for a physical therapist when making recommendations for discharge. Data gathered from this survey may assist in educating future physical therapists, help physical therapists to focus their decisions on factors that have been proven important, and to help other professionals understand the thought process of physical therapists.

Participation in this survey is voluntary and completely anonymous. Your participation acknowledges your informed consent. Instructions are included on the survey form, should you decide to participate. The survey should take less than 15 minutes of your time. A stamped envelope is included for your convenience in returning the survey. Please return the completed survey within two weeks.

Thank you in advance for your cooperation with this research study. Your answers will help contribute to the understanding of discharge decision making processes of physical therapists.

Should you have any questions regarding the survey, please contact Julianna Hermes (419) 382-3948 or Dr. Barbara Kopp Miller, Research Advisor, (419) 383-4289.

Sincerely,

Julianna Hermes

Barbara Kopp Miller
Demographic Information

Sex:  ⮞ Male  ⮜ Female

Age:____________

Ethnicity: ⮞ African American  ⮜ Hispanic  ⮜ Asian  ⮜ Caucasian
           ⮞ Native American  ⮜ Other

Physical Therapy Education:
   ⮞ Bachelor’s Degree  ⮜ Master’s Degree  ⮜ Doctorate Degree

Number of years practicing physical therapy: __________

Current practice setting:________________________________

Number of years practicing in current setting: __________

Have you ever taken a course on discharge planning?  ⮞ No  ⮜ Yes*

   If Yes, please specify:__________________________
Case Study #1

Mrs. A, a (40 or 70) year old white female, arrived to the local hospital complaining of a sudden onset of right sided weakness. She was admitted to the hospital two days ago with a diagnosis of a left cerebrovascular accident with associated right hemiparesis. Physical therapy orders were received today to evaluate and treat.

Mrs. A’s past medical history includes: hypertension, mild obesity, and type II diabetes mellitus. Prior to her cerebrovascular accident Mrs. A was independent in all of her activities of daily living. Mrs. A lives with her husband in a two story home with two steps to enter and a single rail on the right side. The bedroom and bathroom are both located on the second floor of the home; however, there is a bathroom on the first floor.

Mrs. A is alert and oriented to person, place, and time. She does, however, have decreased attention, but is very cooperative during her therapy sessions. Mrs. A demonstrates a decrease in her communication and she suffers from mild dysarthria.

Observations reveal that her skin is intact, with slight edema in the right upper extremity. Mrs. A has decreased sensation to light touch in the right upper and lower extremity, along with decreased proprioception in the right upper extremity. Mrs. A also presents with mild hypotonicity in the right lower extremity and moderate hypotonicity in the right upper extremity.

Passive range of motion is within functional limits. The quality of Mrs. A’s movement is impaired. She has a decreased ability to isolate movement in the right upper extremity and right foot. Mrs. A also presents with right upper extremity inattention and often lets her right arm drop off the side of her wheelchair. There is evidence of a mild subluxation of the right upper extremity. Left upper and lower extremity strength is within functional limits. The right upper
extremity shoulder and elbow measure 2/5, while the hand is a 2-/5. The right lower extremity
has decreased strength at the hip 2/5, quads 3-/5, hamstrings 3/5, and the ankle 2-/5.

Mrs. A complains of 4/10 pain in the right upper extremity.

In sitting, Mrs. A is elongated on the right side with scapular depression and protraction.
Mrs. A weight shifts to the left side. Static sitting control is good with left upper extremity support. Mrs. A is able to maintain balance in sitting when using the left upper extremity for support. Dynamic sitting control is fair; weight shifting causes a loss of stability. Mrs. A requires minimal assist to regain balance. Static standing control is fair; Mrs. A is able to maintain independent standing in the parallel bars with the left upper extremity holding on to the parallel bar for support. Mrs. A supports weight primarily on the left lower extremity. Dynamic standing control is fair. Mrs. A needs upper extremity support to maintain balance.

Mrs. A is able to move from supine to sit with minimal assist times one. During rolling Mrs. A needs verbal cues because she forgets about the right upper extremity. Mrs. A uses bilateral lower extremity with stand by assist to move about in wheelchair. Verbal cuing is needed for patient to keep her right upper extremity inside the wheelchair. Verbal cuing is also needed to help provide safety to Mrs. A within the environment. Mrs. A is able to move from sit to stand with minimal assist times one. Transferring from mat/bed to chair requires minimal-moderate assist times one with a decrease in the use of the right lower extremity and the right upper extremity hangs at the side. Mrs. A is able to ambulate using a wheeled walker fifteen feet with minimal to moderate assist times two. Mrs. A has fair endurance. Mrs. A will be discharged tomorrow.
Please answer the following questions related to the above case study.

Where would you discharge Mrs. A?

- □ Home
- □ Subacute facility
- □ Rehab

Please list the factors you used to determine your discharge placement?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What is the likelihood that Mrs. A will be living independently within the next 6 months?

1 2 3 4 5 6 7
very unlikely very likely
Case Study #2

Mrs. B is a (40 or 70) year old white female who presents to the emergency room following an act of violence against her. Mrs. B was struck in the head with a blunt object during a mugging. Mrs. B was admitted to the hospital after suffering from a moderate traumatic brain injury. Physical therapy orders were received one week after Mrs. B’s admission to the hospital to evaluate and treat.

Prior to the injury Mrs. B was independent in all activities of daily living. She went for a brisk walk with her husband three to five nights a week. Mrs. B worked as a part-time secretary prior to the mugging.

Mrs. B was in good health with no significant past medical history. She lives in a one story home with her husband. She has two children that live about thirty minutes away. There are three steps to enter the home with bilateral handrails. The bathroom is adjacent to the bedroom.

Upon entering Mrs. B’s room her eyes were open; however, Mrs. B is inconsistent in tracking auditory and visual stimuli. Mrs. B is able to respond to verbal commends. Mrs. B is oriented only to person. She has decreased attention and is impulsive. She is able to communicate, but does suffer from mild to moderate dysarthric speech.

Mrs. B’s skin is intact with bilateral lower extremity edema. She has decreased proprioception in the left lower extremity. The left upper extremity has decreased sensation to light touch and two-point discrimination. The left upper and lower extremities present with increased tone. Mrs. B demonstrates an increase in spasticity in the left upper extremity.

Mrs. B demonstrates a hip contracture of five degrees. It is however able, to be stretched to neutral. A plantarflexion contracture of fifteen degrees from neutral is also present. The right upper and lower extremity strength is within functional limits. The left upper extremity has
strength of 1+ at the shoulder, elbow, and wrist. Left lower extremity strength is 2+ at the hip, knee, and ankle.

    Mrs. B’s trunk is shortened on the left side with scapular elevation and retraction. Mrs. B weight shifts to the right side. Mrs. B complains of 5/10 low back pain. She needs moderate assist times one to move from supine to sit. Rolling requires contact guard assist with verbal cuing needed to assist with proper sequencing. Sit to stand requires moderate assist times two. Mrs. B has a low tolerance to standing secondary to dizziness associated with orthostatic hypotension. Transferring from bed to chair requires moderate assist times two for a stand pivot transfer. Static sitting balance is fair minus, patient requires moderate assist times one to sit on the edge of the bed. Dynamic sitting balance is poor. Mrs. B has poor weight shifting techniques. Static and dynamic standing balance is poor.

    Mrs. B ambulates fifteen feet in the parallel bars with moderate assist times three for leg placement, wheelchair movement, and posturing. Mrs. B’s endurance is poor.

    Mrs. B will be discharged tomorrow.
Please answer the following questions related to the above case study.

Where would you discharge Mrs. B?

- □ Home
- □ Subacute facility
- □ Rehab

Please list the factors you used to determine your discharge placement?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What is the likelihood that Mrs. B will be living independently within the next 6 months?

1 2 3 4 5 6 7
very unlikely very likely


Case Study #3

Mrs. C is a (40 or 70) year old white female who was admitted to the local hospital after arriving to the emergency room after being involved in a motor vehicle accident. Mrs. C complained of left lower leg pain and left arm pain. X-rays of the left leg revealed a severe tibia fracture of the left lower extremity. Mrs. C underwent surgery yesterday; an external fixator was placed on the left lower extremity. Physical therapy orders were received today for gait training with non-weight bearing on the left lower extremity.

Mrs. C is mildly obese and also suffers from hypertension. Prior to the car accident, Mrs. C was independent in all activities of daily living. Mrs. C did, however, lead a very sedentary lifestyle. She lives with her husband in a two story home with three steps to enter. The steps have a single railing. The bedroom and bathroom are located on the second floor, with twelve steps to get to the second floor. The steps do have a railing. Mrs. C’s husband is willing to turn the living room into a bedroom with a bedside toilet.

Mrs. C is alert and oriented to person, place, and time. Her sensation is intact. Skin examination reveals increased edema in the left lower extremity. A bloody drainage at the site of the external fixator is also present. Bruising is visible on the left upper extremity with slight swelling.

Active range of motion of the right upper and lower extremity is within functional limits. Active range of motion at the left upper extremity is also within functional limits. Left lower extremity range of motion is limited. Ankle dorsiflexion is zero to five degrees, knee flexion is zero to ninety-five degrees, and hip range of motion is within functional limits. Strength of the right upper and lower extremities is within functional limits. The left upper extremity has a strength of 4/5, the left lower extremity has ankle strength of -4/5, knee 3+/5, and hip 3+/5.
Mrs. C’s posture is within functional limits. Both dynamic and static sitting balances are good. Static and dynamic standing balances are able to be maintained when using a standard walker.

Mrs. C needs minimal assist times one to move from supine to sit to help with the external fixator. Rolling also requires minimal assist times one to help with the weight of the external fixator. Mrs. C is able to transfer from sit to stand independently. Transferring from bed to chair requires minimal assist times one to help with movement of the external fixator.

Mrs. C ambulates twenty feet using a standard walker with stand by assist. Mrs. C’s endurance is fair +.

Mrs. C will be discharged tomorrow.
Please answer the following questions related to the above case study.

Where would you discharge Mrs. C?

- □ Home
- □ Subacute facility
- □ Rehab

Please list the factors you used to determine your discharge placement?

________________________________________________________________________

________________________________________________________________________

What is the likelihood that Mrs. C will be living independently within the next 6 months?

1  2  3  4  5  6  7
very unlikely  very likely
Table 1.0

*Discharge Factors Used By Physical Therapists*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Case Study 1:CVA (40y.o.)</th>
<th>Case Study 1:CVA (70y.o.)</th>
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<tr>
<td>Age</td>
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<td>Alert &amp; Oriented</td>
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<td>Attention</td>
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<td>19%</td>
</tr>
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<td>Tolerance To Rehab</td>
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*Denotes Top Three Factors Used To Determine Discharge Placement*
Table 2.0

*Discharge Factors Used By Physical Therapists*

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<th>Factors</th>
<th>Case Study 2:TBI (40y.o.)</th>
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<td>*25%</td>
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<td>Endurance</td>
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<td>*50%</td>
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*Denotes Top Three Factors Used To Determine Discharge Placement*
Table 3.0

*Discharge Factors Used By Physical Therapists*

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<th>Factors</th>
<th>Case Study 3:TF (40y.o.)</th>
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*Denotes Top Three Factors Used To Determine Discharge Placement*